

WHITE PINE BLISTER RUST CONTROL ON ALLEGHENY NATIONAL FOREST

During the week of October 15, 1945, an examination of white pine areas on the Allegheny National Forest was made by State Leader, R.P. Fatzinger and District Leaders, P.H. Simmons and M.J. DeBerti. Several areas were examined later in the month by District Leader, DeBerti and Ranger, Ward, of the Forest Service. Detailed information on Ribes distribution could not be readily determined as most of the Ribes were defoliated but general overall distribution and abundance was determined for each area so that a fair estimate of control work necessary and method of eradication could be made.

The following brief description of each area was compiled from the available records of previous examinations and eradication work with a brief statement of conditions found when examined in 1945 and an estimate of future work to be done to establish or maintain control on each area where conditions justify additional protection work.

(A1) Hearts Content - Warren County - Watson Township. Pine 100 acres, total 461 acres.

This is a tract of virgin white pine, hemlock and hardwoods. This tract is to be retained in its natural state as a sample of the virgin timber which formerly covered this region. It is desired to give as complete protection as possible to this area rather than merely commercial protection.

When first examined for Ribes in 1929 very few were found in the virgin stand of timber while conditions in the protection zone varied from practically Ribes free sections to heavy Ribes concentrations in other sections.

The entire control area was initially worked in 1929 and reworked in 1931. In 1935, the sections of the area needing it were again reworked which involved the complete working of blocks 6 and 7, about three fourths of block 5 which included all old roads and open spaces and about one fifth of blocks 8 and 9 while covering the roadsides and field edges. The 1935 work consisted of working block 7 (except for 12 acres burned in 1934) and the edges of the main road and all the fields in the area. The virgin timber was scouted but no acreage reported. There is no record available showing what sections were reworked in 1942.

Year	Blocks Worked	Acreage		Ribes Removed		Man Hrs.	Cost
		Pine	Total	Wild	Cult.		
1929	All	100	461	23020	8	456	198.80
1931	All	100	461	13321	-	496	215.59
1935	5, 6, 7, 8, 9,	-	166	6672	-	351 1/2	129.96
1935	7, road and	-	82	2608	-	364	79.61
1942	fields	95	254	1698	-	728	230.00

Control work during 1929 and 1931, supervised by representatives of the Division of Plant Disease Control - subsequent work was performed under direction of F.S. employees.

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No additional pine infections were noted when this area was examined in 1945. In block 7 Ribes were found that had apparently been missed on previous working as well as Ribes regeneration. Recommended that a crew rework block 7 and borders of roads and field edges in block 8. Scout work on balance of control area believed sufficient. Probably require 25 man days for crew work and 3 man days for scout work. Control could then be maintained on area by scout check every four or five years.

(A2) Henrys Mills (Hazelwood Oil Company Tract) Warren County, Sheffield Township. Pine 38 acres, total 135 acres.

This area consists of white pine and hardwood. Sample plots in 1930 showed that 57% of the trees were white pine which averaged 13 inches DBH and 55 - 65 feet in height. Practically no reproduction was present except about two acres in an old field north of the area.

1926 and '27 infection scattered in reproduction and two branch cankers found on area in 1930.

Ribes generally abundant when first examined particularly along the stream east of the pine and the old field north of the pine. This area was initially worked in 1932 and reworked in 1935.

<u>Year</u>	<u>Working</u>	<u>Acreage</u>		<u>Ribes Removed</u>		<u>Man Hrs.</u>	<u>Cost</u>
		<u>Pine</u>	<u>Total</u>	<u>Wild</u>	<u>Cult.</u>		
1932	1 st.	38	135	81102	-	524	224.00
1935	2 nd.	38	141	8535	-	712	155.20

Recommended that this area be discontinued from control program as young regeneration is not present and older pine will probably be out before any loss occurs from any infection that might occur. *Ribes coming in.*

(A3) Kelly Pines - Forest County - Jenks Township. Pine 6 acres, total 140 acres.

Mixed stand of white pine, hemlock and hardwoods used as a public camp ground. Mature pine with practically no reproduction. High scenic value placed on pine in connection with use of this area for recreational purposes. No pine infection found.

Heavy concentrations of large Ribes rotundifolium and a few Ribes glandulosum (skunk currants) were found on this area which was initially worked in 1933 and reworked in 1935.

Year	Working	Acreage		Ribes Removed		Man Hrs.	Cost
		Pine	Totala	Wild	Cult.		
1933	1st	4	140a	4000	-	206	90.00
1935	2nd	15	205	18894	-	1572	314.34a

Very light infection found in 1945. High "flags" on old trees, year of infection not determined. Ribes found near stream. Topography rough and stony, undergrowth medium to heavy, increasing in density as season advances. Ribes eradication should be done as early as possible to do efficient work in the spring to avoid heavy growth. Based on recreational value, area should be reworked by crew (about 40 man days). Future work can probably be done by scout.

(A4)a Sandstone Spring - Warren County - Watson Township. Pine 4 acres, a total 172 acres.

About four acres of mature white pine located in the Sandstone Springs camp ground. Pine to be protected due to its scenic value and location. Area extended in 1935 to protect pine near beaver dam. No pine infection found here.

Ribes rotundifolium were abundant on this area averaging about 135 to the acre.

This area was initially worked in 1933 and partially reworked in 1935 and 1936. Work in 1935 covered part of block 1. 1936 work covered pine area and eastern part of blocks 1 and 2.

Year	Working	Acreage		Ribes Removed		Man Hrs.	Cost
		Pine	Totala	Wild	Cult.		
1933	1st	2	155a	20897	-	360	131.97
1935	1st		17	3616		167	57.61
1935	2nd		12	573	-	51	16.37a
1936	2nd	4	24	5280	-	258a	64.50a

When examined in 1945 several 1936 cankers were found. Recommended that the 1935 extension be discontinued as the few white pine near the beaver dam seem to be too far back in the brush to justify the cost of protection. Original area should be reworked by scout in about a day.

(A5) Hoffman Area - McKean County - Hamilton Township. Pine 3¹/₂ acres, total 220 acres.

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This is a recreational development on the forest and contains several acres of white pines of special scenic importance. Ribes especially abundant in southeast portions and generally distributed over balance of area. Heavy concentrations in section added in 1935, a

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<u>Year</u>	<u>Working</u>	<u>Acreage</u>		<u>Ribes Removed</u>		<u>Man Hrs.</u>	<u>Cost</u>
		<u>Pine</u>	<u>Total</u>	<u>Wild</u>	<u>Cult.</u>		
1934	1st	30	205	65400	-	1532t	321.00
1935	1st	1	15	125875	-	598t	180.58
1935	2nd	30	205	32698	-	1216t	380.68

Recommend that southern part of this area be discontinued due to the light stocking of mature white pine. Suggest the northern part be reworked by a scout (2 days) to protect the young pine in the cabin area and the older pine just west of it. This would reduce the control area to about 155 acres.

(A6) Hunter Tract (Dann Run) - Warren County - Limestone township.
Pine , total 1153 acres.

1934 report estimates eight hundred thousand board feet of merchantable white pine with quite a large area of excellent reproduction and several acres of plantation. Ribes growth over most of area is light.

<u>Year</u>	<u>Working</u>	<u>Acreage</u>		<u>Ribes Removed</u>		<u>Man Hrs.</u>	<u>Cost</u>
		<u>Pine</u>	<u>Total</u>	<u>Wild</u>	<u>Cult.</u>		
1934	1st		1153	17410	-	2870t	625.05

As indicated in the 1934 report, most of the area contains only merchantable pine which does not justify any expenditures for protection as no commercial loss is to be expected. Recommended rework by scout of approximately 352 acres to protect young pine in western part and planted pine in northern part. This would require about 3 man days.

(A7) Kelly Hill - Warren County - Limestone Township. Pine 400 - 500 acres, total 810 acres.

Pine in this area consists of clumps and scattered trees with fairly heavy reproduction according to the 1935 report.

Ribes were abundant in some sections although the northern part and several other sections were worked by scouting. A few small infected pines were found in 1935.

<u>Year</u>	<u>Working</u>	<u>Acreage</u>		<u>Ribes Removed</u>		<u>Man Hrs.</u>	<u>Cost</u>
		<u>Pine</u>	<u>Total</u>	<u>Wild</u>	<u>Cult.</u>		
1935	1st		810	40839	-	2168t	479.80

In 1945 it was found that most of this area contains up to 25 per cent white pine (15 - 30 years) chiefly as an understory to hardwoods and scattered mature pine. Most of this pine will probably be suppressed unless the hardwood overstory is opened up. One old field of about 5 acres is 80 to 90 per cent stocked with 30-40 year old pine. No pine infection noted. Scattered Ribes present. Can be reworked by scout in about 3 days working along top of hill and along field edges and roadsides. If the white pine is to be

maintained as part of the final crop in this area, scout rework is recommended, otherwise, the area should be discontinued from the control program.

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(A8) Sheffield - Warren County - Sheffield Township. Pine ornamentals, total 67 acres.

Ornamental white pine planted on the Sheffield Administrative site. As fields on three sides were Ribes free they were not worked by the crew or reported as eradicated. Report only covers hardwood area north of the station worked by crew although the 32 acres of fields were scouted.

<u>Year</u>	<u>Working</u>	<u>Acreage</u>		<u>Ribes Removed</u>		<u>Man</u>	<u>Cost</u>
		<u>Pine</u>	<u>Total</u>	<u>Wild</u>	<u>Cult.</u>	<u>Hrs.</u>	
1935	1st	Orna.	35	789	-	184	43.04

As there is only about six white pine left on the site and these apparently will not survive, this area should be discontinued and other species used for future ornamental planting.

(A9) Loleta - Elk County - Millstone Township. Pine 8 acres, total 167 acres.

Pine on Loleta recreational area.

Ribes generally distributed. Skunk currants on the flat on the north side Sugarcamp Run at junction with Millstone Creek.

<u>Year</u>	<u>Working</u>	<u>Acreage</u>		<u>Ribes Removed</u>		<u>Man</u>	<u>Cost</u>
		<u>Pine</u>	<u>Total</u>	<u>Wild</u>	<u>Cult.</u>	<u>Hrs.</u>	
1936	1st	8	167	6102	-	660	179.30

Found about 125 white pine in the park area of which 60% have fatal trunk cankers. Some of these infected trees have turned color and a few are completely dead. Heavy infection was 1930 - 35 while a few 1942 infections were found. This area would require about 85 man days to rework while future work could probably be done by a scout. Rework should be done as soon as possible if the Forest Service desires to protect the remaining white pine. (Porcupine damage quite extensive on planted scotch pine.)

(A10) Millstone - Elk County - Millstone Township. Pine 16 acres, total 95 acres

White pine stand is dense and about 30 years old according to 1936 report. Area suggested for recreational development. Ribes abundant and generally distributed.

Protection zones reduced in 1945 and marked with orange paint.

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<u>Year</u>	<u>Working</u>	<u>Acreage</u>		<u>Ribes Removed</u>		<u>Man Hrs.</u>	<u>Cost</u>
		<u>Pine</u>	<u>Total</u>	<u>Wild</u>	<u>Cult.</u>		
1936	1st	19	141	66628	22	1238	413.321
1945	2nd	16	40	7853	-	156	109.901

This was found to be 90 per cent white pine varying from 10 to 40 years old of which 5 to 10 percent is infected with blister rust. Part of area was reworked this year by our Clear Creek eradication crew. Estimated that 20 man days will complete the second working. Future work can probably be done by a scout.

(All) Grander Run - Warren County - Pleasant Township. Pine 300 acres, est., total 931 acres.

Nelrecord of pine conditions.1

Ribes generally distributed. Worked in Block 1 in 1936 with men from transient camps.

<u>Year</u>	<u>Working</u>	<u>Acreage</u>		<u>Ribes Removed</u>		<u>Man Hrs.</u>	<u>Cost</u>
		<u>Pine</u>	<u>Total</u>	<u>Wild</u>	<u>Cult.</u>		
1936	1st		531	173528	-	1238 2352	714.03

About 2 percent of the stand is mature white pine with an occasional young pine. The balance of the stand is hardwood with rather dense reproduction in the openings. Recommended that this area be discontinued from the control programs as there is not sufficient pine to justify control costs.

(A12) Elkhorn Run - Warren County - Watson Township. Pine 61-1/2 acres, total 288 acres.

Noldiscription of this area in the records. According to the map of this area it contains a total of 288 acres of which 140 acres were worked in 1936.

<u>Year</u>	<u>Working</u>	<u>Acreage</u>		<u>Ribes Removed</u>		<u>Man Hrs.</u>	<u>Cost</u>
		<u>Blk</u>	<u>Pine</u>	<u>Wild</u>	<u>Cult.</u>		
1936	1st	1	5	54280	-	11401	
1936	1st	2	16	19406	-	438	
1936	1st	3	40 1/2	28964	-	3301	
1936	1st	All	61 1/2	102650	-	1908	541.50

This stand is about 75 percent mature pine mixed with hemlock and hardwoods. Size ranges from 10 to 20 inches DBH. Practically no reproduction

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except about 50 trees in the opening where the old mill stood. A few infections noted on the old trees. As pine is mature, no additional control work is recommended for this area.

(A13) Lower Mill Creek - Elk County - Ridgway Township. Pine 19 acres, r total 223 acres.

The 1937 report shows a 4 acre block of white pine, 5-25 years old, about 83% white pine, medium to dense stocking, good chance of reaching maturity but trees have poor form and limby boles. The other block of pine of 15 acres consists of 40-60 year old trees with 4-15 year old reproduction, older trees are scattered and merchantable and the reproduction is of medium to dense stocking in groups under the seed trees, 60-80 percent by composition. One trunk canker found on a small pine.

Ribes numerous and large in northern portion of area, less frequent and smaller in southern portion. Eradication difficult because of frequency and size of Ribes and dense weed and fern growth. Topography level to medium sloping. Infection present on Ribes in summer of 1938. Excessive time required for initial working due to the unusually poor type of negro boys assigned to this project from the CCC Camp (S-101) near Ridgway.

Year	Working	Acreage		Ribes Removed		Man Hrs.	Cost
		Pine	Total	Wild	Cult.		
1938	1st	19	223	11449	-	3094	\$30.16

(NOTE: 25 red and 3 white currant bushes in garden of F.G. Mohnsey not removed.)

Light infection present in 1945, 1930 origin. No recent infection found. Area should be reworked by scout requiring about 4 man days. Area on side hill mostly mature pine, small portion 3 - 6 inches in upper end.

(A14) Morrison Run - Warren County - Mead Township. Pine , total 146 acres.

No description of this area in the records. It was found to have natural pine stocking of all age classes with some reproduction. Pine in old clearing badly weeviled and limby while area to north and west does not have sufficient white pine to justify control work. Suggest protection of white pine bordering old clearing using a 600 foot protection zone. This would cover about 70 acres containing 6 or 7 acres of white pine and would require about 20 man days for initial eradication work.

(A15) Phillipsburg Area - Elk County - Spring Creek Township. Pine 30 acres, total 170 acres.

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White pine varied in age from 10 - 50 years, comprises about 60 - 80 percent of fully stocked stand. Some infection on branches and smaller trees. Ribes were plentiful and generally distributed. Initial eradication work done by CGS Camp 101 in 1940 covering 800 foot protection zone. In 1941, protection zone was cut to 600 feet (boundary marked with orange paint) and acreage figures revised.

<u>Year</u>	<u>Working</u>	<u>Acreage</u>		<u>Ribes Removed</u>		<u>Man Hrs.</u>	<u>Cost</u>
		<u>Pine</u>	<u>Total</u>	<u>Wild</u>	<u>Cult.</u>		
1940	1st	34	266	51490	-	5454	1632.60

Area contains mature pine, scattered stocking with scattered young reproduction, seedlings to 10 years. Slow but extensive increase of pine to be expected although heavy sod cover hinders rapid reseeding. Infection on smaller pine light, under 15 percent. No recent infections found. Should be reworked by crew (about 60 man days) after which control can probably be maintained in the future by scout. There is a good opportunity here for planting white pine in the openings in the control area.

(A16) Dice Run - Forest County - Kingsley Township. Pine 88 acres, total 155 acres.

This is a white pine and hardwood mixture. Pine is mostly mature. A few old pine infections found. Ribes light to medium and generally distributed. As pine is mature, no control work is recommended for this area.

(A17) Irwin Run - Elk County - Spring Creek Township. Pine 24 acres, total 155 acres.

About 50 - 60 percent of stand is white pine, 8 to 40 years of age, chiefly younger trees, light to medium stocking. White pine stocking just about on border line between sufficient or insufficient pine to carry on control work. Initial work would require about 50 man days while future work could probably be done by scout.

(A17a) Irwin Run - Elk County - Spring Creek Township. Pine 19 acres, total 95 acres.

Pine on this area same as block A17. Separated from original Irwin Run area as mapped by Forest Service in 1935 by reduction of protection zones when mapped in 1941 by District Leaders' mapping crew. Initial work would require about 50 man days while a scout could probably do any future work needed.

(A18) Ensette - Forest County - Kingsley Township. Pine , total 300 acres.

Scattered white pine 40 years and over occurring in vicinity of

the fire tower and north of tower road. Pine distribution rather limited and is mixed with hemlock and hardwoods. One dead branch canker found. No section of this area was found to have sufficient white pine present to justify control work. Recommend area be dropped from the control program.

(A19) Sill Run - Warren County - Pleasant Township. Pine 4 acres, total 74 acres.

Old field reseeded to white pine about 15 years ago. Trees 15 feet high and average 3 inches DBH. A few 1935-36 cankers found. Three-fourths of control area is old fields, balance hardwood and hemlock. Ribes seem to be more or less generally distributed but chiefly along the roadside and field edges. Recommend eradication of Ribes requiring about 20 man days.

(A20) Lot 516 - Warren County - Watson Township. Pine , total 140 .

Mature pine and hardwoods. No control work recommended. Suggest this area be discontinued from control program.

(A21) Clyde Run - Elk County - Millstone Township. Pine, 5 acres, total 70 acres.

White pine with 3-12 inch diameter range (averages 3 inches) fully stocked. Ribes present on area. Should be eradicated by crew, about 35 man days. Due to heavy cover, Ribes regeneration should be very light so that future work can probably be done by a scout.

(A22) Ask Farm - Warren County - Pleasant Township. Pine 24 acres, total 142 acres.

Pine is in 3 sections all falling within one control area. Section 1 has 14 acres of planted white pine 5 or 6 years old. Some weevil damage but no blister rust infection found. Section 2 is 9 acres of natural reproduction from 10 to 50 years old with 4 to 12 inch DBH. Young seedlings are coming in along edges of this section. Section 3 consists of about 2 acres of mostly mature pine with some pole size present. Light reproduction is coming in next to this section. Ribes seem to be generally distributed. A 500 foot protection zone would be adequate for most of this area due to the density of the surrounding growth. It is estimated that 40 man days would be required for initial work and we recommend that the area be protected.

From our general survey and information secured from the Forest Service personnel, it appears there are 22 areas on the forest which are or had been classed as white pine areas. Of these, 6 areas (1 questionable) should be initially worked, 9 areas (3 questionable) reworked and 7 areas (also part of 2 areas) discontinued. It is estimated that all Ribes eradication work would require 16 man days by a scout and 441 man days by a crew to initially work 776 acres and rework 2490 acres. Three areas and part of another would be discontinued due to insufficient pine stocking while the

balance would be discontinued as the pine present is of merchantable sizes and no commercial loss is to be expected from the disease.

Pine infection is present throughout the forest but generally is rather light with apparently very few young infections. The only area of heavy infection found was at Lolita where about 60% of the white pine have fatal trunk cankers.

Upon completion of initial work and rework now necessary, it is expected that protection can be maintained in the future on all areas by scouting at approximately five year intervals.

Following is a summary of the acreage involved and the estimated man days required for initial work and rework as well as the areas and parts of areas to be discontinued from the control program. No estimate has been made of funds needed since the amount will depend on the labor rates being paid by the Forest Service and whether the men report at the work areas or if transportation costs or paid travel time are involved. However, with the estimated working time listed, anyone familiar with the operation of work projects on the forest and the probable source of labor can readily estimate the cost for any or all of the work to be done.

Initial Work - Now Needed

	<u>Area</u>		<u>Man Days</u>	<u>Acreage</u>
	<u>No.</u>	<u>Name</u>	<u>Crew</u>	
	A14s	Morrison Run	20	70s
(*)	A17	Irwin Run	60s	155
(*)	A17a	Irwin Run	30s	95
	A19	Sill Run	20	74
	A21	Clyde Run	35	70
	A22s	Ack Farm	40s	142
Totals			195	606

(*) Irwin Run is questionable. Pine stocking is rather light. Protection work depends on value of pine in proposed treatment of area in relation to cost of control work. Since stocking borders between protecting or discontinuing area, no recommendation regarding treatment is being made. If the Forest Service wishes to maintain white pine on the area, Ribes eradication is necessary.

Rework - Now Needed

No.	Area	Name	Crew	Man Days		Total	Crew	Acreage		Total
				Scout				Scout		
A1	Hearts Content		25	3		28	85	376		461
✓ A3	Kelly Pines		40	-		40	112	-		112
A4	Sandstone Spring		-	1		1	-	155		155
A5	Hoffman Area		-	2		2	-	155		155
A6	Hunter (Dunn Run)		-	3		3	-	352		352
(*) A7	Kelly Hill		-	3		3	-	810		810
(#) ✓ A9	Loleta		85	-		85	167	-		167
✓ A10	Millstone		20	-		20	55	-		55
✓ A13	Lower Mill Creek		-	4		4	-	223		223
✓ A15	Philipsburg		60	-		60	170	-		170
Totals			230	16		246	589	2071		2660

(*) Kelly Hill might be discontinued, depending on future treatment of the area.

(#) Loleta probably should be discontinued unless replanting is planned for the area.

Areas to be Discontinued

No.	Area	Name	Acreage	Reason
A2	Henry Mills		141	Merchantable
(*) A5	Hoffman Area		65	Insufficient stocking
(*)1 A6	Hunter (Dunn Run)		801	Merchantable
A8	Sheffield		33	Insufficient pine
A11	Grunder Run		531	Insufficient pine
A12	Elkhorn Run		140	Merchantable
A16	Dice Run		155	Merchantable
A18	Musette		300	Insufficient pine
A20	Lot 516		140	Merchantable
Totals			2308	

(*) Only part of these areas to be discontinued.

In connection with this report, BRC-51 record sheets for each area and a map of the forest showing location of each area by number has been prepared for the Forest Service Office at Warren, our Regional office at Cambridge and district office at Brookville. Detail maps for each area will be furnished as soon as possible after we receive the tracings of surveys made by the Forest Service which are to be sent to us for this purpose.

R.P. FATZINGER,

RIBES ERADICATION WORK - ALLEGHENY NATIONAL FOREST BY AREAS

No.	Area		County	Township	Year	Working	Acreage		Ribes		Man Hrs.	Costs
	Name						Pine	Total	Wild	Cult.		
A1	Hearts Content		Warren	Watson	1929	1st	109	461	23020	8	456	\$ 198.80
	"	"	"	"	1931	2nd	100	461	13321	-	496	213.39
	"	"	"	"	1933	3rd	-	166	6672	-	351½	129.96
	"	"	"	"	1935	Rework	-	82	2608	-	364	79.61
	"	"	"	"	1942	"	95	254	1698	-	728	230.00
A2	Henrys Mills		"	Sheffield	1932	1st	38	135	81102	-	524	224.00
	"	"	"	"	1935	2nd	38	141	8535	-	712	155.20
A3	Kelly Pines		Forest	Jenks	1933	1st	4	140	4000	-	206	90.00
	"	"	"	"	1935	2nd	13	205	18894	-	1572	314.34
A4	Sandstone Spring		Warren	Watson	1933	1st	2	155	20897	-	360	131.97
	"	"	"	"	1935	1st		17	3616	-	187	57.61
	"	"	"	"	1935	2nd		12	573	-	51	16.37
	"	"	"	"	1936	2nd	4	24	5280	-	258	64.50
A5	Hoffman Area		McKean	Hamilton	1934	1st	30	205	65400	-	1582	321.00
	"	"	"	"	1935	1st	1	13	125875	-	598	180.58
	"	"	"	"	1935	2nd	30	205	32698	-	1216	380.68
A6	Hunter (Dunn Run)		Warren	Limestone	1934	1st		1153	17410	-	2870	625.05
A7	Kelly Hill		"	"	1935	1st		810	40839	-	2168	479.80
A8	Sheffield		"	Sheffield	1935	1st	Grm.	35	789	-	184	43.04
A9	Loleta		Elk	Millstone	1936	1st	8	167	6102	-	660	179.30
A10	Millstone		"	"	1938	1st	19	141	66028	22	1238	413.32
	"		"	"	1945	2nd	16	40	7855	-	156	109.90
A11	Grander Run		Warren	Pleasant	1936	1st		531	173528	-	2352	714.03
A12	Elk Horn Run		"	Watson	1936	1st	61½	140	102650	-	1908	541.50
A13	Lower Mill Creek		Elk	Ridgway	1938	1st	19	223	11449	-	3094	930.16
A15	Phillipsburg		"	Spring Creek	1940	1st	34	266	51490	-	5454	1,632.60
Sub-total						1st	316½	4594	794795	30	23841	\$6,762.28
" "						Rework	296	1590	98134	-	5904½	1,693.95
Total						All	612½	6184	892929	30	29745½	8,456.21

RIBES ERADICATION WORK - ALLEGHENY NATIONAL FOREST BY YEARS

<u>Year</u>	<u>Type of Work</u>	<u>Acreage</u>	<u>Ribes</u>		<u>Man Hours</u>	<u>Cost</u>
			<u>Wild</u>	<u>Cult.</u>		
1929	Initial	461	23020	8	456	\$198.30
1931	Rework	461	13321	"	496	213.39
1932	Initial	135	81102	"	524	224.00
1933	(Initial	295	24897	"	566	221.97
	-Rework	166	6672	"	351 $\frac{1}{2}$	129.96
	(Total	461	31569	"	917 $\frac{1}{2}$	351.93
1934	Initial	1358	82810	"	4452	946.05
1935	(Initial	877	171119	"	3137	761.03
	-Rework	645	63308	"	3915	946.20
	(Total	1522	234427	"	7052	1707.23
1936	(Initial	979	348908	22	6158	1848.15
	-Rework	24	5280	"	258	64.50
	(Total	1003	354188	22	6416	1912.65
1938	Initial	223	11449	"	3094	930.16
1940	Initial	266	51490	"	5454	1632.60
1942	Rework	254	1698	"	728	230.00
1945	Rework	40	7855	"	156	109.90
All	(Initial	4594	794795	30	23841	6762.26
	-Rework	1590	98134	"	5904 $\frac{1}{2}$	1693.95
	(Total	6184	892929	30	29745 $\frac{1}{2}$	8456.21